DOCUMENT RESUME

ED 110 147 24 JC 750 454

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TITLE	Pilot Study of Puerto Rican Junior Colleges. Final Report.
INSTITUTION	Puerto Rico Junior Coll. Foundation, Rio Piedras.
SPONS AGENCY	National Center for Educational Research and Development (DHEW/OE), Washington, D.C. Regional Research Program.
BUREAU NO	BR-2-B-084
PUB DATE	15 Nov 73
GRANT	OEG-2-2B084
NOTE	45p.; Not available in hard copy due to marginal legibility of the original. Appendices, pages 43 through 73, have been deleted due to poor reproducibility
EDRS PRICE	MF-$0.76 PLUS POSTAGE. HC Not Available from EDRS.
DESCRIPTORS	College Cooperation; College Curriculum; Data Collection; Educational Finance; *Educational Problems; *Educational Trends; Enrollment Trends; *Junior Colleges; *Puerto Ricans; Research Methodology; *Research Problems; Tuition
IDENTIFIERS	*Puerto Rico

ABSTRACT

Despite an arduous effort to cope with modern Puerto Rico's societal needs, Puerto Rican junior colleges' educational offerings are inadequate and often irrelevant. The complexity and peculiarities of the junior college system in Puerto Rico cannot be fully grasped within the existing models for educational research designed for the educational realities of the United States. Relevant comparable data pertaining to the past five years were here gathered and arranged within a new instrument that allows for a comprehensive analytical view of the academic and administrative panorama of junior college education in Puerto Rico. A general overview of the historical trajectory, educational offerings, present needs, and common problems is presented. Data were gathered through a series of questionnaires and by field interviews conducted with administrative and academic personnel. On the basis of the information gathered and analyzed, common problems seem to include the following: high cost of tuition; inadequacy of financial aid, physical facilities, and faculty and administrative development; paucity of vocational offerings; outdated teaching methodology; fierce competition instead of collaboration among institutions. Preliminary recommendations are made, pending a future study. (NHM)

ED110147

28 JAN 1974

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Final Report

Project No. 2B084
Grant No. OEG-2-2B084

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PILOT STUDY OF PUERTO RICAN JUNIOR COLLEGES

November 15, 1973

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INTRODUCTION

There is a serious need for a comprehensive study that will analyze the development of Junior Colleges in Puerto Rico; gather their basic institutional data; consider the separate and common problems they face, and explore their relevancy to the society they are trying to serve. This will lead to designing a theoretical construct that can pinpoint the necessary planning, staffing, administrative and structural changes needed in order to provide a successful educational experience for low income students and adequately fulfil Puerto Rico's current and future manpower needs.

It is the purpose of this research project to present the first comprehensive pilot study dealing with such a problem. The historical development of these institutions has been traced. Relevant data has been gathered for the first time presenting back to back information concerning all Junior Colleges, public and private, in Puerto Rico. On the basis of such data, common and separate problems faced by the institutions have been identified and described.

Such common problems in turn, evidence that although arduously trying to cope with modern Puerto Rico's societal needs, Puerto Rican Junior Colleges educational offerings are still inadequate and often non-relevant.

In order to design the afore-mentioned theoretical construct Puerto Rican researchers face serious methodological problems.

The complexity and peculiarities of the Junior Colleges System in Puerto Rico cannot fully grasped, within the existing models for educational research designed for the educational realities of the United States.

Puerto Rican researchers interested in efficient, relevant findings face the alternatives of either accepting the imported possibly misleading models for educational research, or the challenge of designing an altogether new model specifically suited to our needs.

Because of the nature of a pilot study his last alternative, which is clearly the ideal, could not be undertaken.

We can only state our reservations as to the available methods and models for research on Puerto Rican Junior Colleges and thus express the very tentative character of our findings.

A major in-depth study is necessary if Puerto Rico's Junior Colleges are to provide what Puerto Rican society urgently demands.

II METHODOLOGY

Because of the necessarily introductory nature of a pilot study on the general situation of the Junior Colleges System in Puerto Rico, the first step taken was the sketching of a brief trajectory of all regional colleges since their foundation. This was done on the basis of gathering from each institution a summary auto-description of its own historical trajectory and comparing it with the findings of our historical research on the development of these institutions using other sources.

Our main effort was directed to the contemporary stage of Junior Colleges in Puerto Rico, our second step concentrated on relevant data from the last five years to the date of this study. An instrument was designed where, for the purposes of a comparative study, the gathered data could be organized. We refer to the Universal Data Inflow System (UDIS appendix I).

In order to gather our main data a series of questionaires were prepared covering five basic areas: Curriculum, Income and Expenditures, General Physical Facilities, Personnel and Students, (Appendix II).

In addition, field interviews were conducted with administrative and academic personnel from said institutions. Our own teaching and administrative experience was another resource.

On the basis of this analytical process a series of conclusions were arrived at, which for the reasons explained in the Introduction, at this stage we believe can only be called tentative. These are forwarded in our Summary.

III CONTEXT

The Puertorrican case is quite simple.

There are 4.7 million puertorricans in the nation, 3.2 living in the Island of Puerto Rico, the remaining 1.5 spread through different states of the Union. It has to be clearly understood that the problems faced by the 3.2 community living in the Island of Puerto Rico are unique and quite different from those faced by other puertorricans residing in the mainland. Essentially the Puerto Rican case is one of dramatic transition, from an agricultural to an industrial society. Because of the rapid industrialization process, in less than seventeen years the Island's per capita income increased five-fold, manufacturing, services, government and trade substituting agriculture as cornerstone of the economy.

Puerto Rico has one of the fastest growth indexes in the world (13.4%) yet coupled with one of the highest unemployment ratios throughout the nation (12.3%). In spite of this gigantic stride towards industrialization, the Island's yearly average per capita income is still half or that of the poorest state of the Union (Mississippi). If you add to this that the cost of living in the Island is 13% higher than in the States, and that wages are also on the average 50% lower than Stateside, you don't have to take long to realize the Island's situation is critical.

In terms of relevance to social needs, the educational situation Puerto Rico faces is also critical.

Of the Island's almost 70,000 students serviced by institutions of higher education, 27% are inadequately taken care of by community colleges. Simultaneously, 12,500 high school graduates yearly go without receiving any kind of higher education at all, leaving a gigantic

untrained potential going to waste.

As of this date, there are 15 regional colleges in Puerto Rico with approximately 22,038 students and a faculty of 921, comprising 27% of the Island's over-all higher education services.

Each Junior College tries to be functionally an autonomous unit, yet they all fall essentially within five large groups, responding to a "controlling" institution, i.e.:

INTER AMERICAN UNIVERSITY GROUP (7 Regional Colleges located at: Bayamón, Barranquitas, Aguadilla, Arecibo, Fajardo, Guayama, and Ponce).

CATHOLIC UNIVERSITY OF PUERTO RICO GROUP (2 Regional Colleges located at: Arecibo and Guayama).

UNIVERSITY OF PUERTO RICO (5 Regional Colleges located at: Aguadilla, Arecigo, Bayamón, Humacao and Ponce).

PUERTO RICO JUNIOR COLLEGE (1 Regional College located at: Cupey-Río Piedras).

Most existing Regional Colleges in the Island were originally set-up as transfer-type institutions hence, do not provide a wide range of career education possibilities. Incredibly enough, all Career Training Programs combined, for the whole Island, does not exceed the number of 28, technological education among most of the colleges still amounting to 0.

This clearly describes a pitiful picture of the qualified youth of an essentially low income society going to waste, not because there are not enough employment opportunities as such, but because of the poor allocation of training facilities.

It's obvious that this situation is critical and worse still, not too different from previous years. In spite of imaginative use of resources the overall acute general

picture remains at a stand still.

For the purpose of providing a brief narrative and trajectory of the Junior Colleges grouped under the mentioned controlling institutions, we have compiled historical data pertaining to the Junior Colleges, which was forwarded as of August 1972, by each institution covering the period from academic year 1968-69 to academic year 1972-73.

Let us examine these institutions on the basis of these self-descriptive narratives and their growth in terms of the major items selected:

CATHOLIC UNIVERSITY OF PUERTO RICO GROUP (2 Regional Colleges located at Guayama and Arecibo).

GUAYAMA CENTER, CATHOLIC UNIVERSITY

The Guayama Center of the Catholic University of Puerto Rico began its function as an Extension in August 1954. In 1956 it became a Center offering associate degrees in Arts, Education and Business. The academic aspect was controlled by the Catholic University of Puerto Rico and the economic aspect by the Redemptorist Fathers.

In September 1970, the Catholic University of Puerto Rico assumed the complete control of the academic and economic aspects of the Center. This Center is located in Guayama, Puerto Rico, which is a town of 45,000 habitants. The area developed from an agricultural to an industrial stage. A substantial amount of factories and petrochemicals are being built at the present.

MAJOR ITEMS	1968-69	1972-73
Number of Students	359	855
Number of Faculty	24	36
Square Feet Physical Facilities	8,951	11,063
Total Income	$86,160.00	$284,048.00

CURRICULUM

1968-69 English; Spanish; Physical Education; Theology; Philosophy; Orientation; Social Science; Mathematics; Physical Science; Chemistry; Biology.
CAREER ED: Education; Accounting; Economics; Secretarial Techniques; Business Law; Finance.
ASSOCIATE DEGREES IN: Education; Business Administration.

1972-73 English; Humanities; History; Political Science; Spanish; Theology; Biology; Psychology; Physical Education; Art; French.
CAREER ED: Orientation; Cesol-Institute of Communicative English; Education; Economics; Management, Business Law; Marketing.
ASSOCIATE DEGREES IN: Education; Business Administration; Secretarial Science; Arts and Humanities.

ARECIBO CENTER, CATHOLIC UNIVERSITY

The Arecibo Catholic University Center was established in 1960. The enrollment increment during the last years and the demand for the three associate degrees it offers have maintained an active development throughout the time. The degrees offered are: Associate in Education, Business Administration and Arts and Humanities.

MAJOR ITEMS	1968-69	1972-73
Number of Students	156	341
Number of Faculty	18	24
Square Feet Physical Facilities	8,600	13,800
Total Income	$30,240.00	$109,298.00

CURRICULUM

1968-69 Spanish; English; History; Mathematics; Philosophy; Social Science; Chemistry.
CAREER ED: Secretarial Techniques; Mathematics; Accounting; Business Law; Education.

ASSOCIATE DEGREEES IN: Education; Business Administration; Nursing.

1972-73 English; Spanish; Humanities; Political Science; Philosophy; Mathematics; Physical Education.

CAREER ED: Secretarial Techniques; Accounting; Business Law; English; Education; Management; Marketing.

ASSOCIATE DEGREES IN: Education; Business Administration; Nursing; Arts and Humanities.

INTER AMERICAN UNIVERSITY OF PUERTO RICO GROUP (7 Regional Colleges located at: Aguadilla, Arecibo, Barranquitas, Bayamón, Fajardo, Guayama, and Ponce).

AGUADILLA REGIONAL COLLEGE, INTER AMERICAN UNIVERSITY

The Aguadilla Regional College of the Inter American University of Puerto Rico started as an extension service, its purpose being upgrading the academic preparation of provisional teachers in the northwestern part of Puerto Rico. In 1958 Inter American University established a two year transfer program in Aguadilla and changed the status of its extension there to that of a Regioanl College. Since then it has grown to its current enrollment of 1,000 students.

The Region or Community, served by the Aguadilla Regional College includes the northwestern part of Puerto Rico. Planning Board figures indicated a total population of 188,471 in 1970. It is a traditionally agricultural area, but it includes light industries such as garment and shoe factories that have been established in the past decade. This nascent industrialization is already beginning

to produce a demand for technical and semiprofessional skills which are practically non-existent in the area. With the growing demand for para-medical skills and government workers, an acute labor shortage problem is expected.

MAJOR ITEMS	1968-69	1972-73
Number of Students	424	1,040
Number of Faculty	22	36
Square Feet Physical Facilities	N.A.	16,700
Total Income	$97,800.00	$364,610.00

CURRICULUM

1968-69 Art; Spanish; Physical Education; English; Mathematics; Philosophy; Theology; Social Geography.
CAREER ED: Humanities; Human Development; Child Nursing; Spanish and Mathematics.

1972-73 Art; Biology; Spanish; Geography; Health and Physical Education; English; Mathematics; Philosophy; Religion; Social Anthropology.
CAREER ED: Associate Degrees in Elementary Education; Business Administration; Education.

ARECIBO REGIONAL COLLEGE, INTER AMERICAN UNIVERSITY

The Arecibo Regional College of the Inter American University of Puerto Rico was established in 1956 with an enrollment of 300 students.

Arecibo is the fifth largest municipality in Puerto Rico, with a population of 73,468. This Regional College serves adjacent municipalities totalling a population of 217,769. The area constitutes the north central part of Puerto Rico, one of the Island's richest agricultural areas, and one in which industrialization has been relatively slow, although the sugar and related industries have provided a small amount of manufacturing. Recently

several industrial plants have been established in the nearby area of Barceloneta.

The focus of academic work since its inception in 1956 until 1968 centered around a liberal arts transfer program. Since 1968, however, as in the case of other Regional Colleges like those of the Inter American University the concept of the transfer program has given way to a major emphasis on Career Education.

MAJOR ITEMS	1968-69	1972-73
Number of Students	1,371	2,461
Number of Faculty	24	43
Square Feet Physical Facilities	N.A.	35,946
Total Income	$278,160.00	$594,848.00

CURRICULUM

1968-69 Liberal Arts; Curriculum N.A. Program.

CAREER ED: Associate Degrees in Secretarial Science; Business Management.

1972-73 English; Spanish; Psychology; Religion; Philosophy; Mathematics; Biology; Geography; Sociology; Art Appreciation; Music Appreciation; Physical Education; Social Science; Natural Science.

CAREER ED: Retail Business Management; Accounting; Elementary School Teaching.

ASSOCIATE DEGREES IN: Business Administration; Education.

BARRANQUITAS REGIONAL COLLEGE, INTER AMERICAN UNIVERSITY

The Barranquitas Regional College of the Inter American University of Puerto Rico was established in 1957.

The area that the Barranquitas Regional College serves comprises approximately 104,821 people. It is almost a completely agricultural area, since the difficulties

of transportation have tended to discourage the industrialization that over the past twenty years has developed in other parts of the island.

One of the major objectives of the Barranquitas Regional College since its inception has been the preparation of teachers for the Public Schools of the area.

MAJOR ITEMS	1968-69	1972-73
Number of Students	944	1,421
Number of Faculty	N.A.(6 for '69)	14,900
Square Feet Physical Facilities	14,918	14,900
Total Income	$149,040.00	$566,390.00

CURRICULUM

1968-69 N.A. ASSOCIATE DEGREES IN: Education

1972-73 English; Spanish; Geography; Philosophy; Biology; Mathematics; Religion; Anthropology.
CAREER ED: Education; Secretarial Science.
ASSOCIATE DEGREES IN: Accounting; Business Administration; Elementary Education.

BAYAMON REGIONAL COLLEGE, INTER AMERICAN UNIVERSITY

When opened as an extension in 1960, the Bayamón Center of the Inter American University enrolled twenty eight students and held its classes at night in one of the local high schools. Since then its growth justified its conversion into a Regional College which currently enrolls 1,665 students.

The municipality of Bayamón itself, although having its own administration, can be considered a part of the greater metropolitan area of San Juan. It draws its students not only from Bayamón, but also from other neighboring municipalities totalling a population of 409,385. All of them, especially Bayamón, have shared in the industrial growth that has characterized the metropolitan area

during the last twenty years. There has been a great emphasis on light industry because of the advantage of a low salary pool of non-skilled workers. This latter aspect is rapidly changing, and thus more skilled technicians and semi-professionals are being demanded. This has created and will continue to create in the next decade at least, a demand for trained skilled personnel. The Bayamón Regional College originally offered only a liberal arts transfer program, but its objective has changed during the past few years as its philosophy now fully embraces the Career Education concert.

MAJOR ITEMS	1968-69	1972-73
Number of Students	670	1,665
Number of Faculty	15	69
Square Feet Physical Facilities	19,242	24,863
Total Income	$149,040.00	$510,880.00

CURRICULUM

1968-69 English; Spanish; Art Appreciation; Music Appreciation; Mathematics; Philosophy; Sociology; Geography; Anthropology; Physical Education; Psychology; Economics.

CAREER ED: Education; Accounting; Business Administration; Teacher Administration.

ASSOCIATE DEGREES IN: Business Administration and Accounting.

1972-73 English; Spanish; Art Appreciation; Music Appreciation; Mathematics; Philosophy; Sociology; Geography; Anthropology; Physical Education; Psychology; Economics; Political Science; Biology; Botany; Zoology; Chorus; Ethics.

CAREER ED: Typing; Shorthand; Accounting; Business Administration; Calculus; Office Practice; Teaching Methods; Criminology; Taxes; Auditing.

ASSOCIATE DEGREES IN: Secretarial Science; Business Administration; Elementary Education.

FAJARDO REGIONAL COLLEGE, INTER AMERICAN UNIVERSITY

The Fajardo Regional College of the Inter American University started functioning as a full fledged regional college in August 1971. Before this year it was an extension center adscribed to the Inter American University, but the student demand for increased offerings plus the industrial growth of the region made necessary its conversion to a regional college.

MAJOR ITEMS OF GROWTH	1971-72
Number of Students	270
Number of Faculty	71
Square Feet Physical Facilities	N.A.
Total Income	N.A.

CURRICULUM

1971-72 Biology; Cultural Geography; Psychology; Religion; Mathematics; Anthropology; History; Physics.

CAREER ED: Education; Human Development; Mathematics; Accounting.

ASSOCIATE DEGREES IN: Business Administration; Elementary Education.

MAJOR ITEMS OF GROWTH	1972-73
Number of Students	610
Number of Faculty	N.A.
Square Feet Physical Facilities	N.A.
Total Income	$123,720.00

CURRICULUM

1972-73 Biology; Cultural Geography; Psychology; Religion; Mathematics; Anthropology; History; Physics.

CAREER ED: Education; Human Development; Mathematics; Accounting.

GUAYAMA REGIONAL COLLEGE, INTER AMERICAN UNIVERSITY

A situation similar to that confronted by the Fajardo Center came up in Guayama. What had been an extension center up to 1971 was converted to a regional college. Rapid industrial growth and population increase coupled with greater student demands laid the grounds for the transformation of this center to a regional college.

MAJOR ITEMS OF GROWTH	1971-72
Number of Students	174
Number of Faculty	N.A.
Square Feet Physical Facilities	N.A.
Total Income	N.A.

CURRICULUM

1971-72 Art Appreciation; Oral and Written English; English for Non-Native Speakers; Physical Education; Introduction to Mathematics; Psychology; Spanish; Spanish Literature; Biology; Cultural Geography; Philosophy; Music Appreciation; Religion; Sociology.

CAREER ED: Foundations of Education; Human Development; Spanish; Principles of Economics; Business Management; English; Statistics Methods; Elements of Accounting; Art and Music for Children; Internship and PreInternship.

ASSOCIATE DEGREES IN: Elementary Education; Business Administration and Accounting.

MAJOR ITEMS OF GROWTH	1972-73
Number of Students	368
Number of Faculty	22
Square Feet Physical Facilities	2,625
Total Income	$92,180.00

CURRICULUM

1972-73 Art Appreciation; Oral and Written English; English for Non-Native Speakers; Physical Education; Introduction to Mathematics; Philosophy; Psychology; Spanish; Spanish Literature; Biology; Cultural Geography; Music Appreciation; Religion; Sociology.

CAREER ED: Foundations of Education; Human Development; Statistics Methods; Elements of Accounting; Spanish; Principles of Economics; Business Management; Art and Music for Children; English; Internship and PreInternship.

ASSOCIATE DEGREES IN: Elementary Education; Nursing; Accounting.

PONCE REGIONAL COLLEGE, INTER AMERICAN UNIVERSITY

The Ponce Regional College of the Inter American University of Puerto Rico began as an extension center and achieved the status of Regional College in 1963. Although the main campus of the Catholic University of Puerto Rico is located in Ponce, there is a need for additional facilities for post-secondary education evidenced by the fact that the enrollment at the Ponce Regional College has grown to 950 students this year while a State Regional College has been developing in the same city. Space limitations have proven a severe handicap to the normal growth of this Regional College. Last year an additional rented building was added to its plant resources, but these are already severely taxed.

The Regional College in Ponce draws its students from Ponce and nearby municipalities totalling a population of 201,411. The need for skilled technical employees exists and will continue to expand at a rapid rate in the

foreseeable future.

The Ponce Regional College concentrated its academic efforts on a liberal arts transfer program. Nevertheless, it has begun to shift to an emphasis in Career Education.

New two-year programs have already been instituted in the fields of Elementary Education, Secretarial Sciences, Law Enforcement, Accounting and Retail Business Management. Two-year programs in business related fields are expected to be added to the curriculum during the course of the next and following academic years. Studies are also under way for programs in the para-medical field. The southern coast of Puerto Rico has traditionally been an area of extremely low average income, which combined with the rapid industrialization of the area has caused severe social dislocations. In five years the population has decreased by 100,889.

MAJOR ITEMS	1968-69	1972-73
Number of Students	N.A.	959
Number of Faculty	N.A.	58
Square Feet Physical Facilities	N.A.	24,769
Total Income	N.A.	N.A.

CURRICULUM

1968-69 N.A.

1972-73 Spanish; English; Sociology; Geography; Psychology; Education; Philosophy; Art; Music; Biology; Mathematics.

CAREER ED: Police Organization; Criminal Investigation; Criminal Law and Procedures; Juvenil Delinquency; Traffic Control; Evidence and Court Procedure; Seminar on Civil Rights; Accounting; Mathematics; Children's Music; Foundations of Education; Human Development; Internship on Education; Language Arts (Spanish); Language Arts

(English); Typing; English Shorthand; Spanish Shorthand; Office Theory; Office Practice.

ASSOCIATE DEGREES IN: Police Science; Secretarial Science; Elementary Education; Accounting.

UNIVERSITY OF PUERTO RICO GROUP

AGUADILLA REGIONAL COLLEGE, UNIVERSITY OF PUERTO RICO

The Aguadilla Regional College was founded on August 1972. It is housed in rented buildings and now serves 356 students enrolled in courses leading to Associate Degrees in Secretarial Techniques, Commercial Management and Accounting.

MAJOR ITEMS	1972-73
Number of Students	356
Number of Faculty	25
Square Feet Physical Facilities	29,800
Total Income	$20,580.00

CURRICULUM

1972-73 Spanish; English; Social Science; Humanities; Mathematics; Biology; Chemistry; Physical Education; Accounting; Management; Marketing; Economics; Statistics; Shorthand; Typing; Filing.

CAREER ED: Secretarial Techniques; Commercial Management; Accounting.

ASSOCIATE DEGREES IN: Business Administration and Secretarial Science.

ARECIBO REGIONAL COLLEGE, UNIVERSITY OF PUERTO RICO

The Arecibo Regional College was opened on August 1967 to provide college level education to high school graduates in the Northern Region of Puerto Rico. Arecibo is located on the North Coast of Puerto Rico, with a popula-

tion of about 85,000 and the region comprises 12 municipalities with an estimated population of 400,000 people.

The college opened with 515 students. The following year the enrollment rose to 1,019. Present facilities have limited enrollment to 2,472.

A Nursing Associate Degree Program was established in 1968, with 35 students and four full-time faculty members. In July 1969 the Arecibo District Hospital School of Nursing Diploma Program closed down an agreement with the Regional College, which in turn committed itself to take up the enrollment. At present there are 155 students in the program.

Associate Degree Programs in Secretarial Sciences and Business Management were begun in 1968.

MAJOR ITEMS	1968-69	1972-73
Number of Students	801	2,472
Number of Faculty	N.A. for the yr.	112
Square Feet Physical Facilities	39,065	68,265
Total Income	$38,808.00	$102,166.00

CURRICULUM

1968-69 Biology; Chemistry; Psychology; English; Spanish; Mathematics; Humanities.

CAREER ED: Nursing Program (A.D.)

1972-73 Accounting; Industrial Management; Commercial Management; Secretarial Techniques; Elementary Education; Business Law; Business English; Cost Accounting; Statistics; Filing; Typing; Personnel Administration; Economics, Nursing Program; Secretarial Sciences; Business Management.

ASSOCIATE DEGREES IN: Secretarial Science; Nursing; Business Administration; Accounting; Elementary Education.

BAYAMON REGIONAL COLLEGE, UNIVERSITY OF PUERTO RICO

The Bayamón Regional College of the University of Puerto Rico initiated its operations on August 1971, offering 12 technical programs as well as serving as a transfer institution.

ITEMS OF GROWTH	1971-72	1972-73
Number of Students	513	1,661
Number of Faculty	11	78
Square Feet Physical Facilities	56,000	176,158
Total Income	N.A.	$67,003.00

CURRICULUM

1971-72 Accounting; Commercial Management; Industrial Management; Computers; Civil Construction; Electronics Instrumentation; Mechanics; Dietetic; Road Construction.

ASSOCIATE DEGREES IN: Business Administration; Engineering, Applied Science.

1972-73 Dietetic; Accounting; Commercial Management; Industrial Management; Computers; Civil Construction; Electronics Instrumentation; Secretarial Sciences; Natural Science; Pedagogy; Social Science; Mechanics; Road Construction.

ASSOCIATE DEGREES IN: Applied Science; Engineering and Business Administration.

HUMACAO REGIONAL COLLEGE, UNIVERSITY OF PUERTO RICO

The Humacao Regional College of the University of Puerto Rico was founded in 1962, serving a transfer program as well as a liberal arts program. In 1967 semiprofessional programs were added granting Associate Degree in Nursing, Secretarial Science and Business Administration and from then on the College has continued offering a

-Career Education.

ITEMS OF GROWTH	1968	1972
Number of Students	1,025	2,534
Number of Faculty	90	154
Square Feet Physical Facilities	72,586	164,935
Total Income	$47,383.00	$222,685.00

CURRICULUM

1968 Spanish; English; Psychology; Mathematics; Humanities; Social Science; Chemistry; Accounting; Secretarial Science; Nursing; Statistics: Management; Mercantile Law.

ASSOCIATE DEGREES IN: Applied Science; Business Administration; Education and Nursing.

1972 Spanish; English; Psychology; Mathematics; Humanities; Social Science; Chemistry; Biology; Music.

CAREER ED: Accounting; Secretarial Science; Nursing; Statistics; Management; Education; Physical Therapy; Occupational Therapy; Physical Education; Audio Visual Techniques.

ASSOCIATE DEGREES IN: Applied Science; Nursing; Education and Business Administration.

PONCE REGIONAL COLLEGE, UNIVERSITY OF PUERTO RICO

The Ponce Regional College of the University of Puerto Rico was inagurated on August 1970, offering technical programs conducent to associate degrees, and transfer courses in Liberal Arts.

MAJOR ITEMS	1970-71	1972-73
Number of Students	361	1,167
Number of Faculty	49	69
Square Feet Physical Facilities	N.A.	N.A.
Total Income	N.A.	$51,204.00

CURRICULUM

1970 Biology; Physical Education; Spanish; English; Physics; Humanities; Mathematics; General Chemistry; Social Science; Civil Construction; Arquitechtural Drawing; Physical Therapy; Occupational Therapy; Accounting; Electronics; Technical Mathematics; Data Processing; Computers.
ASSOCIATE DEGREES IN: Nursing; Applied Science; Business Management.

1972 Biology; Physical Education; Spanish; English; Physics; Humanities; Mathematics; General Chemistry; Social Science; Sociology.
CAREER ED: Accounting; Refrigeration; Thermodynamics; Electronics; Technical Mathematics; Data Processing; Computers; Calculus; Engineering Graphics; Secretarial Science; Thermo Therapy; Water System Plans; Sewage.
ASSOCIATE DEGREES IN: Applied Science; Nursing; Business Management; Engineering.

PUERTO RICO JUNIOR COLLEGE (Río Piedras-Cupey Campus)

The Puerto Rico Junior College was founded in Río Piedras, San Juan, Puerto Rico 23 years ago and accredited in 1957, being the pioneering Community College institution established in the Island.

MAJOR ITEMS	1968-69	1972-73
Number of Students	2,886	4,178
Number of Faculty	113	151
Square Feet Physical Facilities	86,108	115,833
Total Income	$1,012,604.00	$1,520,389.00

-CURRICULUM

1968-69 Liberal Arts Program with Concentration on: Secretarial Science; Natural Science; Humanities, Pre-School Education; Elementary Education; Assistant Librarian; Accounting; Management; Transportation; Marketing; Secretarial Science; General Program in Business; Assistant Technical of Librarian; Nursing.

ASSOCIATE DEGREES IN: Education; Business Administration; Applied Science.

1972-73 Liberal Arts Program With Concentration on: Social Science; Natural Science; Humanities, Pre-School Education; Elementary Education; Assistant Librarian; Accounting; Management; Transportation; Marketing; Secretarial Science; General Program in Business Administration; Assistant Technical of Librarian; Medical Secretarial Techniques, Criminology; Correctional Techniques.

ASSOCIATE DEGREES IN: Education; Business Administration; Applied Science; Nursing; Police Science.

IV COMMON PROBLEMS

COMMON PROBLEMS

On the basis of the information gathered and analyzed the common problems faced by Puerto Rican Junior Colleges seem to be the following:

1. High cost of tuition
2. Inadequate aid for students
3. Lack of adequate physical facilities
4. Faculty Development
5. Inadequacy of Spanish Learning Resources
6. Outdated, ineffective teaching methodology with little emphasis on student learning
7. Lack of trained and experienced administrative leadership
8. Fierce competition instead of collaboration between the different institutions
9. Inadequate methods for gathering statistical information and thus deficient evaluation, planning and development procedures.

HIGH COST OF TUITION AND INSUFFICIENT AID FOR STUDENTS

The average Puerto Rican who pursues studies at a Junior College faces an extremely high cost for his education. If we consider that the average annual family income for students attending Junior Colleges does not exceed $3,000 per year, it should be easy to grasp the problem these students confront when the average credit cost in the private Junior Colleges (which serve 68% of them) is $30.00. This means that for one year of studies the student will have to invest almost one-third of his family annual income in education.

Tuition, in turn, appears invariably fixed for all areas. Students in regions with high rates of unemployment

and low p/c income, like Aguadilla and Barranquitas, are overwhelmed by the tuition cost of the regional Junior Colleges. Students in these regions must pay the same amount as those in urban and industrialized areas.

The following municipalities are the ones with the lowest economic index in the Island:

Aguadilla; Isabela; Moca; Aguada; Rincón; Añasco; Hatillo; San Sebastián; Las Marías; Maricao; Utuado; Lares; Morovis; Villalba; Juana Díaz; Coamo; Barranquitas; Corozal; Toa Alta; Naranjito; Comerío; Cidra; San Lorenzo; Las Piedras; Naguabo; Yabucoa; Patillas; and Maunabo.

Per capita annual income in these municipalities range from $500 to a maximum of $1,000. There are seven Junior Colleges serving them: CUPR-Arecibo; IAU-Aguadilla; Arecibo, Barranquitas, UPR-Aguadilla, Arecibo, Humacao. Of these, four are private and have the highest tuition rates in the Island.

The combined financial aid received by these regional colleges in 1972-73 amounted to $1,143,698.00 while the remaining colleges, located in higher income municipalities received a combined financial aid of $1,794,871.00.

In turn, students attending the public regional colleges of the University of Puerto Rico are benefited by the lower tuition cost of $5.00 per credit hour.

Funds alloted for student financial aid amount to $2,267,523.00 in total for all Junior Colleges serving 22,088 students. On the average, Junior College students in Puerto Rico receive $100.00 per year as financial aid.

The economic situation is precarious for Junior Colleges students in the Island, facing high tuition costs. All this is aggravated by a high cost of living that exceeds by 13% that of the U. S. mainland.

The job market in Puerto Rico is highly competitive and, even with B.A. degrees, it is sometimes difficult to obtain employment. It is urgent that the Junior Colleges students economic dilemma be understood and action be taken to alleviate their burden. Studying in a modern industrial society under severe economic stress in addition to the complex problems that all citizens face, is not a road towards educational achievement. Students should not be blamed. They should be helped.

LACK OF ADEQUATE PHYSICAL FACILITIES

There is an extremely high ratio of students per classroom among Puerto Rican Junior Colleges. A total of 283 classrooms serve 22,088 students at an average ratio of 78 students per classroom. In most cases, a classroom does not exceed 500 square feet. By traditional academic standards, this indicates a substantial classroom shortage.

For the academic year 1968-69 the combined physical facilities of all regional colleges in Puerto Rico was 258,401 square feet, excluding the regional colleges of the IAU that were not functioning that year (Fajardo, Guayama, Ponce), and the regional college of the UPR in Ponce.

By 1972-73 the combined physical facilities of all Junior Colleges amounted to 699,657 square feet, excluding Fajardo-IAU and Ponce-UPR, where information was not available.

On the basis of the latest information, academic facilities of all Junior Colleges in Puerto Rico amounts to 226,540 square feet, while administrative facilities cover 94,174 square feet.

The evident inadequacy of available facilities for academic purposes should convey to students, teachers and administrators alike the idea that the educational facilities of the community should be used as supplementary resources. If funds are scarce to construct more facilities let classes move to libraries, homes, public facilities, etc. in order to achieve more comfortable and adequate atmospheres for the pursuit of knowledge and skills. The cooperation of governmental agencies and private industries should be stressed. An altogether non-traditional approach is needed. Suggestions coming from the educational community should also be encouraged and discussed.

FACULTY DEVELOPMENT

There are five levels in the administrative structure among which faculty members of Junior Colleges in Puerto Rico are divided: Professor, Associate Professor, Assistant Professor, Instructor and Lecturer.

The following is a distribution by rank of Puerto Rican Junior Colleges Faculty members during academic years 1968-69 and 1972-73.

	1968-69	1972-73
Professors	2	8
Associate Professors	8	46
Assistant Professors	16	148
Instructors	168	343
Lecturers	88	208

It can be inferred that the number of Professors quadrupled, Associate Professors increased five-fold,

Assistant Professors increased nine times, while Instructors and Lecturers doubled.

This is a relatively good rate of faculty improvement, but it has not been enough because of the great student enrollment growth in said institutions.

As of 1972-73 there are still nine Junior Colleges with no full professors. More than half of these institutions in Puerto Rico lack full professors within their faculty.

In many cases there are no terminal degree programs and great amounts of money have to be spent by the institutions in order to allow study-leaves for faculty members. In addition, these institutions are always loosing personnel to more affluent institutions that offer better working conditions to their faculties.

In 1972 it was suggested by the presidents of the major institutions that a proposal should be drafted in order to grant funds in cooperation with the Puerto Rican government, several private foundations and industries, so as to produce the resources needed to provide for the development of a better trained faculty. The first measure to be implemented was a fellowship study-program in off-campus graduate schools of Puerto Rican universities. The second stage of the proposal would be the provision of training and learning resources where non-existent. The idea, however, has not yet been initiated.

INADEQUACY OF SPANISH LEARNING RESOURCES

Spanish is the language for instruction in Puerto Rican educational system. Nevertheless, learning resources for most post-secondary education subjects, (books, films and other audiovisual means) are often only available in English. While many Puerto Ricans have a general knowledge of the English language proficiency so as to study

-at ease, is not the general rule. Besides, it is a dubious educational practice to pretend to instruct in a language that is emotionally alien for students.

In order to solve the problem it would not be wise to rely on creating more English courses. When a student is ready to enter a post-secondary educational institution he has already pursued twelve academic years of English instruction. More years, in all probability, will not be a big help.

Joint institutional efforts are obviously needed in order to provide useful, up-to-date translation of relevant learning resources. Economic resources are scarce and translations are very expensive. Concerted efforts would, most certainly, reduce costs and assure the availability of learning resources.

Industry, government and private foundations could be attracted so as to obtain funds that will subsidize the acquisition of translated resources through a duly qualified common fund. Teams of experts can be organized so as to direct the selection of learning resources.

As a bonus, this could initiate a movement away from the traditional text-book instruction that is also responsible for the stagnation of Junior Colleges' offerings.

OUTDATED, INEFFICIENT TEACHING METHODOLOGY

Modern instructional approaches, with a few meritorious exceptions, are generally absent in the educational method of Junior Colleges in Puerto Rico.

Teaching relies in out dated notions of "knowledge transmittal" by means of lectures and text-books as donors of "truth". There's little or no use of modern educational

technology, while already substantially improved methods are widely used in Junior Colleges throughout the United States.

Thus, individualized instruction, modules, systematic approaches and teacher accountability for student learning are still far away from our post-secondary educational reality.

If we are to provide our students with the kind of education they are increasingly demanding, if we are to improve our student retention rates so as to use more efficiently the scarce funds we invest in education, the present situation must change as soon as possible.

There is an obvious need for inter-institutional cooperation leading to the development of new methods that will concentrate on student learning instead of "teaching".

Transplanting methods proven effective in USA will not do it. Our educational reality is so different that Puerto Rican institutions must develop their own alternatives.

LACK OF TRAINED AND EXPERIENCED ADMINISTRATIVE LEADERSHIP

The changes in the economic structures of the Island and the growth of student population demand experienced and trained leadership for high, intermediate, and managerial personnel in post-secondary education.

A significative change in this respect has been occuring in Puerto Rican post-secondary educational institutions. Whereas traditionally foreigners occupied the leading positions, Puerto Ricans have slowly begun to replace them.

Nevertheless, the institutions are facing a situation where top level administrative personnel, theoretically prepared to perform their functions, are practically inexperienced. In newer institutions dependent from a parent institution, usually a capable and experienced administrator is transferred from the central offices to the new facilities. But this is obviously not enough.

It is necessary to implement procedures for in-service internships where administrators-to-be can obtain practical experience that supplement their theoretical studies.

A possibility that could be considered suitable to local conditions is a program providing for a subsidized internship with a duration from 3 to 12 months. An intern receivesthe cooperation and supervision of experienced personnel while involved in the administrative procedures of a post-secondary education institution.

There have been successful programs similar to the one we have briefly described: The American Council on Education's Academic Internship Program and the Inter American University Program.

FIERCE COMPETITION INSTEAD OF COLLABORATION BETWEEN DIFFERENT INSTITUTIONS

The first Junior Colleges in Puerto Rico were not given the rightful assistance needed for fulfiling their important educational role.

With notable exceptions they received scarce funds and second rate personnel from parent institutions. Eventually because of the demands caused by Puerto Rico's complex and accelerated economic development, the importance and attention adscribed to Junior Colleges began to gain momentum.

Nevertheless, concerted action for planned inter-institutional efforts was non-existent and rival institutions were simultaneously established in the same locality leading to fierce competition, from piracy of personnel to duplication of services in order to survive.

Recently, the situation has begun to improve substantially. Task forces for the planned development of post-secondary institutions in the Island have been organized, and there is an awareness for the need of concerted, inter-institutional action, that in a way could be easy to achieve. After all, although densely populated, Puerto Rico comprises a rather small geographical area (3,500 sq. miles).

Besides the task forces, in the last four years two organizations have developed that include the overall spectrum of higher education institutions in the Island.

One, the Puerto Rico Association of Presidents, includes all presidents of duly accredited public and private institutions. The other, the Consortium of Puerto Rico Regional Colleges comprises all duly accredited community colleges, public and private, established for 5 years or more, and currently devoting its efforts towards an Island-wide faculty and curriculum development program.

However, these efforts although a step forward, are far from achieving the absolute collaboration so urgently needed.

INADEQUATE METHODS FOR GATHERING STATISTICAL INFORMATION

Cooperative efforts for gathering data relevant to the Junior Colleges System in Puerto Rico are almost non-

existent.

Data necessary for thorough analysis, evaluation and planning is dispersed at best, or simply nowhere to be seen.

The problem is even more acute if we consider that systems for data recopilation differ from one institution to the other, thus, data gathered often cannot be used for comparative studies.

Further, the non-comparable data gathered, is as a rule, incomplete.

There is a critical need for the creation of a Centralized Data Bank that will standardize data gathering procedures; relevant, hitherto unknown data; and effectively disseminate same, making it available for the use of all institutions.

Evidence of this need is shown by the acute disparity of the regional manpower demands of our economy and the scarce output of skilled personnel from community colleges.

In addition, there are no effective structures, or mechanisms, within government, universities or the private industrial sector, that can pinpoint and gauge the fluctuative Island-wide manpower demands to which career education has to be geared.

The continued absence of such a Centralized Data Bank implies the continuation of the present futile duplication of limited efforts and wastage of increasingly scarce resources.

V SUMMARY

In our Introduction we expressed the urgent need for "a comprehensive study that will analyze the development of the College System in Puerto Rico, gather their basic institutional data; consider the separate and common problems they face, and explore their relevance to the society they are trying to serve".

We stated that a desirable consequence should be designing a theoretical construct "that can pinpoint the necessary planning, staffing, administrative and structtural changes needed in order to provide a successful educational experience for low-income students".

We must now state what we consider the major accomplishments and flaws of this research.

We have achieved what we consider to be only a first step towards a comprehensive study of the Junior College System in Puerto Rico. Relevant comparable data pertaining to the past five years was gathered and arranged within a new instrument that allows for a comprehensive analytical view of the academic and administrative panorama of Junior College Education in Puerto Rico. We refer to the Universal Data Inflow Sistem (UDIS) (Appendix I). A general overview on the historical trajectory, educational offerings, present needs and common problems is presented.

With the UDIS and our own personal, subjective experience in the field (teaching, administration, interviews) we were able to identify the common problems Junior Colleges are facing at an operational level, namely:

1. High cost of tuition
2. Inadequate aid for students
3. Lack of adequate physical facilities
4. Faculty Development
5. Inadequacy of Spanish Learning Resources
6. Outdated, ineffective teaching methodology with little emphasis on student learning
7. Lack of trained and experienced administrative leadership
8. Fierce competition instead of collaboration between the different institutions
9. Inadequate methods for gathering statistical information and thus deficient evaluation, planning and development procedures

During the course of this research we learned that current methodological models for educational research designed in the U.S.A. by American educational researchers, which have almost always been used for conducting research in Puerto Rico, are inadequate for our needs. This of course, is based on the assumption that Puerto Rican society is a unique example of social, political and economic development.

Current methods used for educational research in Puerto Rico are adaptations of those designed for exploring the educational problems of American society. Strikingly, the structure itself of research proposals are identical to those in vogue in the United States.

If, as we think, the design of a research model is not in itself neutral and implies a subjective position on the part of the researcher, the need to adjust to foreign research models, necessarily taints the relevance of re-

sults with non-relevant shades.

We designed UDIS so as to obtain a back to back view of relevant data pertaining to the Junior College System in Puerto Rico for the past five years and attempt an analysis that would furnish a comprehensive view of the problems these institutions are facing. Nevertheless, we consider that our findings might have been mislead because the nature of a pilot study does not allow for such a major undertaking as an original model for Puerto Rican educational research.

Based upon our findings we submit our recommendations, which can only be considered as preliminary pending a future study.

1. Immediate concerted action must be taken in order to provide Junior Colleges students with economic aid so as to alleviate the pressing burden that forces them to disburse high amounts of money that they cannot possibly afford, in order to obtain post-secondary education and employment.
2. Even though available physical facilities among Junior Colleges are inadequate and scarce for academic and vocational purposes, available funds should be dedicated to our first recommendation as a priority. To cope with the problem of inadequate physical facilities, students, teachers and administrators should strive to discover ways to use the educational resources and facilities of the community so as to supplement the available facilities. Libraries, museums, private homes, private industry facilities and the like, can be

used in creative and enrichening fashion if only a non-traditional approach to this problem is adopted.

3. Because the existing faculty resources, although representing an improvement on previous years, are still not adequate for the needs of our growing educational clientele and programs for faculty development are based on traditional frameworks which represent obstacles for improvement, concerted exploration of other alternatives such as the one proposed in 1972 for fellowship study programs and in-service faculty development must start immediately. This will allow for catering both to development and service. It is urgent that the usual solution of sending professors on study-leaves be supplemented with in-service faculty development programs.

4. It is recommended that the reality of the inadequacy of available Spanish learning resources be accepted. Teams of Puertorrican professors should be recruited to translate the learning resources that are currently being used to the detriment of the majority of our non-English-proficient students. Bilingualism in education must be a build-up over the proficiency in the native language. Students at post-secondary level that are still non-proficient in their language cannot be expected to understand a second language. Compensatory education in a second language thus cannot make achievers out of these students.

5. If improvement is desired in the results of Junior College education, administrators must encourage students and teachers alike to develop daring approaches that will emphasize learning and downplay teaching.

   In addition teacher training institutions, private and public, should incorporate in their curriculum the specific subject of Junior Colleges as unique educational institutions that attempt catering to different societal needs. Subjects such as: The Origin and Development of Junior College Education in Puerto Rico; The Junior College Concept of Education, etc., should be urgently designed and offered.

   It is time to recognize that Junior Colleges are different from four year colleges but nevertheless can offer effective, relevant career education. This is not possible if teaching methodology within these institutions remains traditional. A change in teaching methodology makes it necessary to revise the present curriculum in teacher-training institutions.

6. We recommend in-service internships where Puerto Rican administrators-to-be can obtain practical experience while receiving the theoretical frames of reference in educational institutions. Theoretical studies in educational administration are crippled within the complex educational environment of industrial societies if they lack practical training in real problem solving and workshops in human relations. These are the mi-

nimum requirements to be met for an acceptable professional training in educational administration. Revision of study programs within institutions for the training of personnel in educational administration is a must.

7. In most of our recommendations the phrase "concerted action" or something similar is repeated expressing the pressing need for achieving collaboration and erradicating inter-institutional competition.

We recommend that leading educational officers in Puerto Rico explore the reasons for this competitiveness and the critical situation that Junior Colleges face in the above-mentioned areas so as to consider that competition only aggravates the common problems.

Efforts towards cooperation should be encouraged by the governmental and private institutions directly affected by the inadequate educational offerings and results sprung from this situation. If it is desired that formal education meet the manpower needs of our society, Junior Colleges should be aided so as to reduce the inter-institutional competitiveness to which they are forced in order to survive.

A final, we dare say not tentative, finding must be added. The Junior Colleges System in Puerto Rico has not been able to fulfil the vital functions it must cater to, in Puerto Rican society, because it has been assumed that these institu-

tions are in Puerto Rico what they are in the U.S.

As it is evidenced in our historical Context, Puerto Rican Junior Colleges were initially transfer-type institutions subject to main campuses or inadequate attempts to fulfil minor clerical and similar manpower needs. Development has been slow and arduous. The reasons would in itself constitute an independent research project.

If researchers assume that the functions and organization of these institutions in Puerto Rico are similar to those in the United States, conclusions can be logically, efficiently and objectively derived while being a deformation of our educational reality.

Data gathering and brief historical excerpts do not allow for an in-depth study. It is painfully urgent that Puerto Rican researchers undertake the design of new research models based on the particularities of Puerto Rican society. This can only be done on the inevitable basis of learning by doing and trial and error.

Exploring the ideological basis that leads to the establishment and guides the development of any educational institution is a must if an explanation is desired in addition to a mere description. No such study on the arrival of the Junior College concept in Puerto Rico has been conducted.

The gap evident between the imported concept of what a Junior College is and its institutional implementation in Puerto Rico has to be explained if it is desired that these institutions achieve the stated purposes for their creation, or alternative purposes required by our present

and future realities.

The information gathered and organized in this study through the UDIS, is mainly descriptive. In order to be able to fully grasp its implications, a massive, in-depth study must be initiated in the very near future.

We strongly recommend that this pilot study be considered as a modest initial step towards a different, more relevant framework with which to face the underdeveloped condition of Puerto Rican educational research on the subject of two year post-secondary educational institutions.

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